

THE CORRELATION BETWEEN KNOWLEDGE AND MENSTRUAL HYGIENE PRACTICES IN CHILDREN WITH EARLY MENARCHE

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ABSTRACT---Background: *The average age of menarche gradually experiences a shift. Most children nowadays experience menarche at the age of less than 12 years old. Child experiencing early menarche tends to have no preparation in dealing with menstruation.*

Purpose: *The purpose of this study is to analyze the correlation between knowledge and the practice of menstrual hygiene in children with early menarche*

Method: *This study used a cross-sectional approach. The sample population was children with early menarche in elementary school. A total of 49 sample respondents were chosen using the total sampling method. The dependent variable was knowledge of menstruation and the independent variable was practice of menstrual hygiene. Data were collected using questionnaire, and spearman rank correlation test with level of significance of $\alpha .050.05$ was used to analyze the data.*

Results: *The result showed that there is a correlation between knowledge on menstruation and the practice of menstrual hygiene ($p = 0.01$) with correlation coefficient (r) = 0.716. There is a strong positive correlation between knowledge of menstruation and practice of menstrual hygiene. The higher the knowledge, the better the menstrual hygiene practice in children with early menarche.*

Conclusion: *It can be concluded that if children with early menarche have high knowledge of menstruation, the practice of menstrual hygiene will likely be good as well.*

Keywords--- *Early Menarche, Knowledge of Menstruation, Practice of Menstrual Hygiene*

I. INTRODUCTION

In this current era, there has been a shift in the age of menarche, in which young girls experience their first menstruation while they were less than and/or 10 years old. This phenomenon is known as or early menarche¹. During this time children experience many changes. Changes occur quickly and suddenly, especially in the reproductive organs, hence the child could not always cope or behave appropriately towards those changes². Umairah's (2013) research in children with normal menarche or over 12 years of age, states that knowledge about

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menstrual hygiene in the good category is equal to 87.5%. The number of children in the research who experienced early menarche and were not yet ready to handle their menstruation is equal to 92.3%³.

School-age children should have basic knowledge of reproductive health, such as cleaning their genitals, knowing sexual identity, reproductive processes and the characteristics of puberty, which for girls involve menstruation. However, at SDN Pucang 1, SDN Pucang 2, SDN Pucang 3 and SDN Pucang 4 Sidoarjo, children's knowledge about reproductive health, especially in terms of menstrual hygiene is still minimal due to the lack of information that is caused by the absence of reproductive health education in schools. This contradicts the condition of the female students who require the adequate information on menarche and the correct menstrual hygiene.

Indonesia experienced a decline in menarche based on the results of Riskesdas, 5.2% of children in 17 provinces in Indonesia have experienced menarche under the age of 12 years old. Indonesia ranks 15th out of 67 countries with a decrease in the age of menarche, reaching 0.145 years per decade. As many as 25.3% of young women in East Java experience menarche at 11-12 years old^{4,5}.

Early menarche is the first menstruation experienced by a fertile female under 12 years old. The age of menarche which occurs more quickly is influenced by various factors such as genetics, consumption of foods high in fat and junk food, BMI, and socioeconomic⁶. The older the age, the maturity level of someone will increase as well, be it in terms of strength or way of thinking. Knowledge can influence someone in taking action. Vulva hygiene knowledge and skills is an effort to maintain personal hygiene. Menstrual hygiene that must be done is changing pads every 4 hours, drying the vagina with a towel or tissue after urinating, and using loose underwear that can absorb sweat. The act of cleaning genitalia that is incorrect during menstruation can result in infection of the reproductive organs. Poor menstrual hygiene can cause vulvar pruritus, irritation, inflammation, vaginal secretions, and pain. The inadequacy of menstrual hygiene knowledge and practice is also a factor in the occurrence of vulvar cancer^{1,7,8}.

Maintaining the reproductive organs must be done early, namely when children were 1-5 years old by doing a simple way of introducing the reproductive organs briefly and teach them to maintain the cleanliness of the genitals through various methods such as toilet training. Reproductive hygiene can be explained by the self-care theory stated by Orem, in which self-care is defined as an appearance or practical activity based on individual desires and carried out to maintain life, health and well-being. Menstrual hygiene practices that are carried out effectively can maintain the reproductive organs health and development according to the suitable age and growth. Self-care has two components, namely self-care demand, and self-care agency. Menstrual hygiene practices are related to self-care demand as a necessity during menstruation. In the component of the self-care agency, the implementation of menstrual hygiene practices requires good abilities, one of which is the proper and correct menstrual hygiene knowledge which is expected to have an impact on good self-care as well. Various problems that occur drive researchers to do further research to determine the correlation between knowledge and the practice of menstrual hygiene in children with early menarche based on the self-care theory of Dorothea Orem. Comprehensive nursing care is expected to be provided in the maintenance of reproductive health starting from an early age⁹⁻¹¹.

II. METHOD

This study applied correlational design. The sample population in this study were 46 students from the fourth and fifth grades of elementary schools in Sidoarjo, East Java, Indonesia who experienced early menarche under the age 12 years old. Total sampling was applied as the sampling technique.

The total population was less than 100, thus the entire population was set as the sample of the study which involved 46 people. The independent variable in this study is menstrual hygiene knowledge. The dependent variable is the practice of menstrual hygiene. The material used in this study was a questionnaire sheet.

The data was analysed using cross distribution table and then tabulated. The correlation between knowledge and the practice of menstrual hygiene in children with early menarche was sought using Spearman Rank Correlation with the level of significance $\alpha \leq 0.05$. If the test result was $p \leq 0.05$ then H1 is accepted. If $p \geq 0.05$, H0 is accepted; meaning that there is no meaningful relationship between the measured variables. All statistical data measurements were performed using SPSS (Software and Service Solution).

This research has been declared "Ethically Feasible" with a Certificate of Ethical Feasibility from the Faculty of Nursing, Universitas Airlangga, Surabaya, Indonesia.

III. RESULTS

Characteristics of Respondents

The table below explains the results of the distribution of respondents based on the first age of menstruation, parental education, type of work, and sources of further information.

Table 1: Characteristics of Respondents

N o.	Characteristics	Criteria	F	%
1	Menarche	9 years old	2	4.08
		10 years old	15	32.6
		11 years old	29	63.04
	Total		46	100
2	Parents' education			
	Father	Junior High School	1	2.7
		High School	22	47.8
		Diploma 1	1	2.7
		Bachelor's Degree	20	43.4
		Master's Degree	2	4.08
	Total		46	100
	Mother	Elementary School	1	2.7
		Junior High School	2	4.08
		High School	20	43.4

		Diploma 1	1	2.7
		Diploma 3	3	6.5
		Bachelor's Degree	19	41.3
	Total		46	100
3	Mother's Occupation	Housewife	22	47.8
		Civil Worker	6	13.04
		Private Worker	12	26.08
		Teacher	2	4.3
		Health Worker	3	6.5
		Entrepreneur	1	2.1
	Total		46	100
4	Older Sister	Yes	15	32.6
		No	31	67.4
	Total		46	100
5	Information on Menstruation	Yes	38	82.6
		No	8	17.4
	Total		46	100
6	Source of Information	Parents	34	73.9
		Religion Teacher	1	2.1
		Internet	3	6.5
		None	8	17.4
	Total		46	100

Menstrual Hygiene Knowledge

The knowledge of 17 respondents can be grouped into the medium category (36.97%).

Table 2: Menstrual Hygiene Knowledge in Children with Early Menarche

Menstrual Hygiene Knowledge	F	%
Good	15	32.60
Moderate	17	36.97
Lacking	14	30.43
Total	46	100.00

Menstrual Hygiene Knowledge Parameter

The majority of respondents, as much as 22 students or 47.8%, lack knowledge on how to clean the vulva.

Table 3: Menstrual Hygiene Knowledge Parameter in Children with Early Menarche

Parameter	Menstrual Hygiene Knowledge						n	%
	Good		Moderate		Lacking			
	F	%	F	%	F	%		
Understanding of menstrual hygiene	4 6	100	0 0	0 0	0 0	0 0	4 6	100
The aim of menstrual hygiene	4 6	100	0 0	0 0	0 0	0 0	4 6	100
Methods of cleansing the vulva	1 5	33	9 20	22 47.	8 6	47. 8	4 6	100
The usage of underwear	1 9	41	1 5	33	12 8	26. 8	4 6	100
The proper use of sanitary napkins	1 2	26. 8	2 7	58. 6	7 2	15. 2	4 6	100
The impact of usage	3 4	73. 9	0 0	0 0	12 8	26. 8	4 6	100

Menstrual Hygiene Practices

The practice of menstrual hygiene in 19 respondents can be categorized into the moderate category (41.30%).

Table 4: Menstrual Hygiene Practices in Children with Menarche

Menstrual Hygiene Knowledge	f	%
Good	14	30.43
Moderate	19	41.30
Lacking	13	28.27
Total	46	100

Correlation between knowledge and the practice of menstrual hygiene

Based on the results of statistical tests using the rho Spearman correlation test with significance level $\alpha \leq 0.05$, the results obtained $p = 0.01$. P value ≤ 0.05 indicates that H_1 is accepted, meaning that there is a correlation between knowledge and the practice of menstrual hygiene in children with early menarche. Correlation coefficient (r) = 0.716 in a positive direction indicates that there is a strong correlation between knowledge and the practice of menstrual hygiene

Table 5: Analysis of The Correlation Between Knowledge and Menstrual Hygiene Practice on Children with Early Menarche

Menstrual Hygiene Knowledge	Menstrual Hygiene Practice						ñ	%
	Baik		Sedang		Kurang			
	F	%	F	%	F	%		
Good	9	19.6	5	10.8	0	0	14	30.4
Moderate	4	8.7	10	21.7	3	6.5	17	36.9
Lacking	0	0	4	8.7	11	23.9	15	32.6
Total	13	28.3	19	41.3	14	30.4	46	100
Spearman Rho $r = 0.716$; $pp = 0.01$								

IV. DISCUSSION

Based on the results of the study, respondents were still categorized as lacking, especially on the parameters of how to clean the vulva. Interviews conducted by researchers revealed that menstrual hygiene information that was once received by the respondents was only knowledge about the general description of menstruation such as the use of sanitary napkins during menstruation. Detailed knowledge such as how to properly clean the vulva has never been taught before. Knowledge is the result of knowing, after people sense an object, they obtain knowledge through the eyes and ears, other factors that influence are derived from education, experience, social relations and exposure to mass media such as magazines, TV and books¹²⁻¹⁴.

Correct and accurate information obtained by respondents can be one of the factors affecting one's knowledge, the more accurate information a person gets, the higher the knowledge he or she possessed. Interviews conducted by researchers with teachers at school during the data collection obtained the fact that one of the causes of students not being exposed to information about menstrual hygiene in schools was the assumption that talking about menstruation in the school environment was taboo. According to teachers, menstruation is an unusual topic to talk about with elementary school students^{15,16}.

In a social context where issues about menstrual hygiene are not discussed openly due to stigma and taboo, students have little understanding of what is happening to their bodies during puberty. Socio-cultural factors are also an important factor surrounding the knowledge of menstrual hygiene. The assumption which highlights that the topic of menstruation is a taboo in the community makes the provision of knowledge on menstrual hygiene unusual in the

community, including in the school environment. Observations and interviews conducted by researchers on teachers in the schools obtained the fact that in the school environment counseling has never revolved around reproductive health. School health unit facilities do not provide preventive and promotive efforts, causing menstrual hygiene information in schools to be limited^{17,18}.

The quality and access to information can have a major impact on sexual education, including the provision of information related to menstruation. Information about menstruation that is not obtained from a formal education or school environment also influences a child's knowledge about menstrual hygiene, this is due to the tendency to trust information that is obtained from an expert such as teachers and health workers. The mothers of children with insufficient knowledge revolving feminine hygiene is seen to have a low level of education. Mothers who have higher education are more likely to have good knowledge about menstruation and menstrual hygiene. Parents, especially mothers, are the closest people to a child. The fastest information obtained by a child is sourced from the mother, thus, the education that the mother has can influence the knowledge possessed by the child.^{19,20}

This can be explained by the social cognitive theory proposed by Bandura, which is based on three assumptions, one of which is that individuals learn by imitating what is in their environment, especially the behaviors of others. The behavior of others who are imitated is called model behavior or example behavior. If the impersonation gets reinforcement, then the behavior that is imitated will become a person's own behavior. Children are good imitators, hence it is easier for them to imitate the behavior of those around them, causing it to be possible for respondents to imitate their habits at home²¹.

The results obtained by respondents with the lowest score could be due to the biased data. In filling out the questionnaire there were some items that were not answered, it could be possible that the respondents did not understand the contents of the questionnaire and were embarrassed to ask the researchers. The age of respondents in this study is 9-11 years old. Research data explained that age can affect the knowledge possessed by children, the higher the age, the better the knowledge possessed by children. Observations made by researchers when collecting research data found that children feel ashamed when they have to talk about menstrual hygiene with their peers as well as to more mature women. However, shyness may instead cause errors in hygiene practices during menstruation. Girls tend to handle themselves and refrain from social interaction rather than consulting a medical team. Shame can limit the exchange of information, causing children to lack partners to discuss. This enlarge the change for children to get incorrect information, with no one to justify the child's assessment of menstrual hygiene information^{7,22,23}.

The better the knowledge, the more menstrual hygiene practices that children do. These results are in line with Orem (2001) which states that self-care agency owned by someone will influence them to implement self-care. Self-care agency in this research refers to menstrual hygiene knowledge. Awareness of the need to gain knowledge and the ability to seek knowledge will affect the actions taken by someone⁹.

Self-care agency can change any time through the influence of the basic conditioning factor. Basic conditioning factors that influence the respondents in this research are age, health care system, family system and external environment. The implementation of self-care is based on self-care demand or the need for someone to be involved in

self-care and receive care. If the self-care demand is higher than the self-care agency, then the child will have self-care deficit. Self-care demand in this research is a person's need to be involved in self-care and receive care during menstruation. In respondents who have low self-care agency, which in this research is knowledge, there will be an imbalance with self-care demand, causing the practices done by respondents to be low and self-care deficit occurs^{11,24}.

When self-care deficit occurs, nurses have a role as a nursing agency to help maximize the ability to carry out self-care during menstruation through nursing care actions. One of the nurses' roles that can be carried out is as an educator, in which that they can provide correct knowledge to children in order for children to be able to carry out proper menstrual hygiene practices. Based on Orem's theory, the component of self-care agency is not only knowledge as basic capabilities; there is another hierarchy, namely the power component which in this case relates to the ability of a person to make decisions in implementing self-care and the ability to carry out self-care^{20,25}.

V. CONCLUSION

There is a correlation between knowledge and the practice of menstrual hygiene. Knowledge about menstruation can affect the practice of menstrual hygiene; the higher the knowledge, the better the practice of menstrual hygiene is performed by early menarche children.

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